

Wetlands Conservancy Program

Mapping Products

The Department of Environmental Protection's Wetlands Conservancy Program is mapping the state's wetlands using aerial photography and photointerpretation to delineate wetland boundaries. The Program produces maps identifying wetlands that are one quarter acre or larger in size. DEP uses these maps to document the extent and type of the state's wetlands. This information also improves coordination among regulatory programs on wetland and water quality issues.

The Program also supplies this vital resource information to communities. When the maps for a city or town are completed, DEP gives a set to the conservation commission. The Program notifies commissions to arrange for them to receive copies of the maps and to schedule a meeting to discuss their potential uses. Commissions have found the maps useful in creating local wetland inventories, cross-checking permit applications, and assisting in enforcement. The wetland maps also are a valuable planning tool for other municipal boards, planning agencies, landowners, and land use consultants.

The Mapping Process

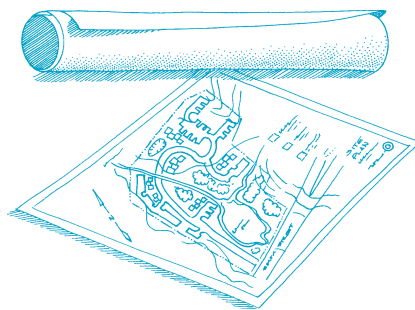
The photos used in this inventory process are **color infrared (CIR) aerial photos** at a scale of 1 inch = 1,000 feet. The photos are viewed by experienced interpreters from the University of Massachusetts who use special magnifying equipment to delineate wetlands down to a minimum size of one-quarter acre. The types of wetlands identified in the inventory include salt marshes, wooded swamps, freshwater marshes, and barrier beaches.

(See the wetland classification key inside for more information.) Currently, the Program has completed wetland photointerpretation for more than 45% of the state. The Program plans to complete the entire state by the end of 2003.

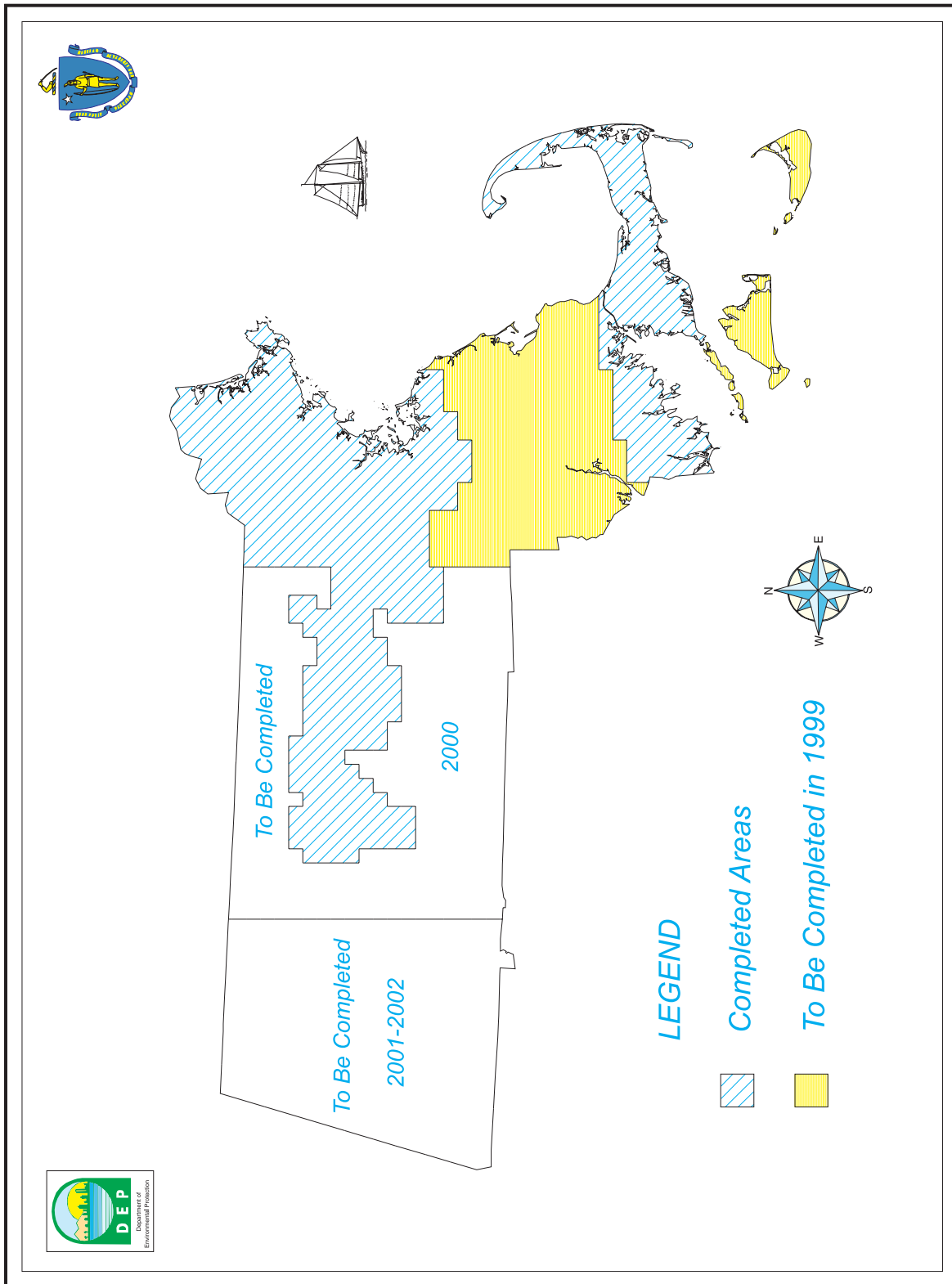
Photointerpretations are field checked on a regular basis to maintain quality control. Additional fieldwork is conducted to resolve or clarify interpretation questions.

The map upon which the wetland delineations are displayed is an **orthophoto map** at a medium scale of 1 inch = 417 feet (see sample inside). This extremely accurate map is photo-based and shows landscape features, such as roads and buildings on an individual parcel level. The delineations from the CIRs are transferred onto the orthophoto map. At this time, more than 35% of the state is covered by this type of base map. Statewide coverage is expected to be completed in the next several years.

Note: wetland delineations developed in this inventory are photointerpreted and do not substitute for the field delineation information required under the Massachusetts Wetlands Protection Act (M.G.L. c.131, s.40) and its regulations (310 CMR 10.00).



Statewide Wetlands Map Availability





Wetlands Map: This is a sample section of an orthophoto map showing approximately 360 acres in Westford. Delineated wetlands are marked in yellow (see classification key on this page) and hydrological connections are noted with blue lines. *Note: hydrological connections developed in this inventory should not be presumed to have a higher level of accuracy than ones depicted on USGS topographic maps.*

Wetlands classification key:

DM = Deep Marsh
M = Shallow Marsh, Meadow or Fen
SS = Shrub Swamp
Wooded Swamp Dominated by:
WS1 = Deciduous Trees
WS2 = Coniferous Trees
WS3 = Mixed Trees

BG = Bog
CB = Cranberry Bog
TF = Tidal Flat
SM = Salt Marsh
BE = Coastal Beach
BB = Barrier Beach System

D = Coastal Dune
RS = Rocky Intertidal Shore
OW = Open Water
BA = Coastal Bank, Bluff or Sea Cliff
U = Upland

Eelgrass Mapping Project

In a related project, the Wetlands Conservancy Program has mapped eelgrass beds along the coast, making Massachusetts the first state to completely inventory its eelgrass resources using aerial photography, Global Positioning System (GPS), and a digital base map. Eelgrass beds are important wetland resources



that serve as nursery areas for finfish and shellfish, filter pollutants, and buffer the shoreline from waves. Since these habitats are negatively affected by pollution, they are good indicators of water quality along the coast. This valuable

resource information is being shared with communities and other state agencies. Maps with eelgrass beds are being distributed to conservation commissions. For more information about eelgrass data, contact Charles Costello, Section Chief, Wetlands Conservancy Program, at 617/292-5907.

Wetlands Map/CIR Costs

Communities receive one set of maps free of charge. Additional copies of maps and CIRs are available at the cost of reproduction. See inside for information about map availability.

Orthophoto Map:

\$15 each (on average 5-7 per town)

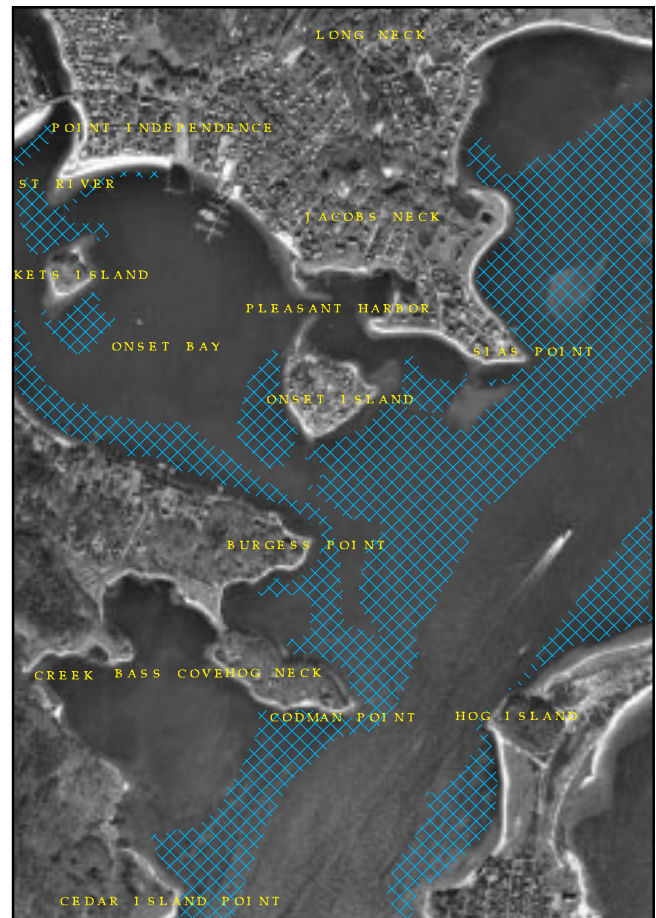
Color Infrared Photo (CIR):

\$15 each (on average 10-12 per town)

For More Information

For more information or to obtain wetlands maps or eelgrass data, contact Charles Costello, Section Chief, Wetlands Conservancy Program, at 617/292-5907.

E-mail address: ccostello@state.ma.us



Eelgrass Beds: This is a sample section of an orthophoto map showing approximately 2.6 square miles of Onset Bay in Wareham. Eelgrass beds are marked in blue.



A publication of the Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Dept. of Environmental Protection, One Winter St., Boston, MA 02108.

February 1999

This information is available in alternate format upon request by contacting the ADA Coordinator at 617/574-6872.

Printed on 30% post-consumer recycled paper with a grant from the U.S. Environmental Protection Agency (Region One), Section 104(b)(3) of the federal Clean Water Act.